INDEX.

ILLUSTRATIONS.

A

Accident, docking, curious.. 404
Acropolis of New York...... 136
Aeroplane, Kress............ 137
Airship, dirigible............ 10
Allen, F. I.................. 227
Alternator, Parsons.......... 260
Ant life, new features....... 265
Aqueduct, Jerome Park....... 342
Arc circuit, whistling........ 358
Arc lamp, Rasmus............ 250
Army transport service...... 177
Asphalt industry, Trinidad, 161, 166
Assouan dam................. 273
Auto-commutator, telephone.. 85
Automobile, electric, Krieger 357
Automobile, gasoline......... 148
Automobiles, De Dietrich..... 120
Automobiles, gasoline........ 57

B

Bagworm 330
Balance, actinic.............. 11
Balloons at Vincennes........ 232
Barometer, mercurial......... 74
Basaltic columns............. 68
Basin, model, U. S........... 341
Bat, giant, of Philippines.... 35
Battery, gas, new............ 310
Battery, storage, Edison..... 376
Battle of Santiago........... 121
Battleship Czarovitch........ 212
Bayonet exercises............ 324
Bean weevils................. 298
Beaumont oil well............ 74
Bee's sting.................. 329
Bending rails................ 200
Berlin subway................ 84
Bicycle, foot and hand....... 73
Bicycle joint, hydraulic...... 324
Blackboard eraser, cleaner... 250
Boat, submarine, Turkish... 280
Boiler explosion............. 228
Boiler explosions............ 24
Boiler feed, Rice............ 263
Boiler, solar motor.......... 169
Boiler, the Vanderbilt....... 100
Bolometer, the............... 11
Bookholder, new............. 154
Boonton's forge............. 165
Brake, electric.............. 216
Brasses and bearings........ 21
Broaching machine.......... 21
Breech plug, new............ 75
Brick carrier................ 378
Bridge, East River..241, 246, 369
Bridge, London, widening.... 89
Brontosaurus 184
Bunk for cars and ships..... 170
Buoy, petroleum............. 117
Burner, hydrocarbon......... 218

C

Cacti of California.......... 149
Camera, the largest......... 134
Canals, Canadian............ 89
Candlestick, miners'......... 58
Cannon, weather............ 260
Capsuling machine.......... 138
Car brake, electric.......... 216
Car fender, Watson......... 372
Car ferries.................. 40
Car mover, Kurtz's.......... 282
Cars, pressed steel......... 385
Cars, street, old, utilizing... 409
Carbureter, De Dietrich...... 120
Carriage, motor, De Dietrich. 121
Casts, plaster, large......... 249
Ceiling switch............... 170
Celtic, launch of............ 276
Ceratosaurus 184
Channel, irrigation.......... 53
Chimney, concrete........... 308
Chimneys, tall............... 21
Cigar factory................ 309
Cliff dwelling park........... 297
Clipper grinder, new........ 122
Clock, ingenious............. 7
Clock, perpetual motion..... 276
Clock, Russian, novel........ 52
Cocoa pods.................. 360
Coil, induction, new......... 7
Collar for shafts............. 170
Columns, basaltic............ 68
Constitution, launch of...... 312
Constitution, yacht..... 289, 389
Copper mining in America... 356
Copy holder, new............ 154
Corn, pod................... 135
Cotton gin.................. 218
Coupling, the Zodel......... 21
Cruiser Montcalm........... 10
Curie, experiments of........ 346
Cushion for vehicles......... 362
Cutler's shop at Exposition.. 90
Czarovitch, battleship....... 212

D

Dam, Assouan............... 273
Derrick 250
Dinosaurs, three............ 184
Dock, dry, floating.......... 377
Doorlatch, refrigerator...... 138
Dredge, dipper, powerful.... 116
Dredger, new................ 25

E

East River Bridge........241, 246
Electrograph, the............ 372
Elevator, water............. 104
Ellipsograph, an............ 106
Engine, rotary, Porter....... 201
Engines, hoisting........... 216
Eucalyptus, blossom......... 149
Excavations at Nippur....... 129
Experiments of M. Curie..... 346
Explosion, boiler............ 228
Explosions, boiler........... 24
Exposition, Pan-American.... 361

F

Farming, irrigation.......... 53
Faucet, automatic........... 404
Feathers, ostrich............ 161
Fender, car, Watson......... 372
Ferries, car................. 40
Field glass, military........ 10
Fifth-wheel, novel........... 282
Fire-alarm, pyrotechnic...... 6
Fire hydrants, valve for..... 122
Floor, East River Bridge..... 369
Flying machine, Hofman's... 281
Flying machine, new......... 72
Flying machine, Whitehead's. 357
Forge, Boonton's............ 165
Fomentations, press for...... 75
Fountain, ice................ 328
Fountains, electric.......... 212
Frost valve, automatic....... 292
Fulton, launch of............ 388
Furnace, electric............ 180

G

Gas battery, new............ 310
Gas, water, apparatus....... 97
Gas, water, manufacture.... 33
Gasoline runabout..........57, 148
Gasoline tri-moto vehicle..... 73
Gin, cotton.................. 218
Glass, plate, industry........ 305
Goose, tailor's............... 202
Gramophone 260
Grapevine moth............. 394
Gray, Elisha................ 72
Grazing pen, moving........ 245
Gumming, saw, machine...... 66
Gun, disabled, of Kearsarge.. 345
Gun, Gathmann.............. 313
Gun, Maxim, latest.......... 248
Gun, rapid-fire.............. 20
Gun-stock, adjustable........ 410
Gun, torpedo................ 314
Gun, weather................ 260
Guns, British, modern........ 248
Gyroscope, electrical......... 245

H

Hammer, power, new......... 388
Harbor, New York........... 26
Harvesting a rice crop....... 53
Hawk, tarantula............. 202
Hay stacker................. 250
Hinge, locking.............. 106
Hoisting device.............. 36
House, moving a............ 56
Howitzer, 6-inch............ 248
Hydrants, valve for......... 122
Hygroscope 36

I

Ice conveyer, new........... 308
Ice fountain................. 328
Igniter, Roche.............. *292
Independence, yacht.... 193, 389
Induction coil, new.......... 7
Ink well, fracture of........ 84
Insect, interesting........... 330
Insect parasite, an........... 394
Insulator, Woolbert.......... 106
Inventions, recent........... 75
Iron rose.................... 296
Irrigation ditch.............. 20
Irrigation, farming.......... 53

J

Jerome Park reservoir....337, 342

K

Kearsarge, disabled gun of.. 345
Korea, launch of the........ 228

L

Lamp, arc, Rasmus.......... 250
Lamp, Cooper Hewitt........ 266
Lamp for buoys............. 117
Lamps, lens for............. 84
Lathe for columns.......... 17
Launch of the Celtic........ 276
Launch of Constitution...... 312
Launch of the Fulton........ 388
Launch of the Korea........ 228
Launch of the Ohio.......... 353
Launch of Shamrock II...... 293
Lens, tubular, for lamps..... 84
Life guard, Watson.......... 372
Lighting, train, from axle... 56
Line, electric, Valtellina..... 408
Locomotive boiler........... 100
Locomotive, electric......... 168
Locomotive, express......... 165
Locomotive, express, German. 49
Locomotive, petroleum....... 36
Low, Seth B................. 373
Lubricator, Slater........... 234
Lysistrata, yacht............ 372

M

Mail-box, improved.......... 404
Man, truncated.............. 105
Mantis religiosa............. 105
Map of Canadian canals..... 90
Map of Jerome Park......... 342
Marble, testing.............. 393
Mastodon, Brooklyn......... 312
Maximite, tests of........... 325
Mercury bath, Hamy......... 388
Metal beater, Thurston...... 27
Metal and woodworking...... 282
Millinocket mill, map........ 230
Mining, copper, American.... 356
Mirograph 37
Model-basin, U. S........... 341
Moore, Edward B............ 275
Mortising machine........... 346
Mosquito cage............... 314
Motor carriage, De Dietrich.. 120
Motor-cycle 57
Motor, De Dietrich.......... 120
Motor, gasoline............. 57
Motor, solar, boiler......... 169
Motormen, school for........ 209
Mounds at Nippur........... 134
Mutoscope, the.............. 196

N

Needle point................ 329
New York, acropolis of...... 136
New York harbor............ 26
Niagara Falls power plant... 229
Nile reservoir, the.......... 273
Nippur, excavations at....... 129
Nut, relief.................. 75

O

Observatory, astro-physical.. 11
Ohio, launch of the.......... 353
Oil burner, wickless......... 218
Oil well, Beaumont.......... 74
Orange peel, object of....... 88
Orchestra man, the.......... 117
Ordnance, British........... 248
Ore unloader................ 153
Omnigraph, the............. 216
Ostrich feathers............. 164

P

Pail, fish bait............... 154
Pan-American Exposition.... 361
Park, cliff-dwelling.......... 297
Pen, Fowler................. 250
Pendulum beats, adjustment. 122
Pepper tree, the............ 149
Petroleum buoy............. 117
Petroleum well, Beaumont... 74
Philippine, transport........ 262
Philippines, transport service. 177
Phosphorus, production of.... 180
Photomicrography 329
Pile driver, new............. 232
Pine needle industry........ 344
Pipe, steel, manufacture.... 200
Pipe and stud wrench........ 186
Pipe wrench................. 218
Piping, wood................ 6
Pipe wrench, new........... 138
Pitch lake, Trinidad....161, 166
Plate planing machine....... 200
Plow, double-share.......... 263
Pod, corn................... 135
Potter of Old Berry......... 135
Power plant, Niagara Falls.. 229
Press for fomentations....... 75
Prinzessin-Victoria-Luise, yacht 81
Procris, caterpillar of....... 394
Provisioning transatlantic liner 401
Pump, self-measuring....... 378
Pump valve gear............. 154

R

Racing machine, De Dietrich. 120
Radio-conductor, Popoff...... 324
Radiograph, stereopticon..... 245
Railroad accident, peculiar... 184
Railway tie, metal........... 362
Railway tunnel, Boston...... 185
Railway, underground, Boston 69
Railway viaduct............. 340
Railways, steep, in the U. S.. 65
Raisin industry, the......... 3
Rapid transit tunnel......... 321
Ray, X, work................ 245
Razor blade magnified....... 329
Refrigerator door latch...... 138
Reservoir, Jerome Park..337, 342
Rice farming................ 53
Rocking-chair and cradle.... 410
Rocks, flow of.............. 393
Rose, iron.................. 296
Runabout, gasoline.......57, 148

S

Sad-iron, new.............. 202
Salt deposits............... 217
San Gimignano............. 148
Saw setting machine........ 68
School for motormen........ 209
Scorpion 202
Screw-eye driver........... 292
Seat, supplemental, vehicle.. 362
Sedgwick, transport......... 177
Shaft, repair of, at sea...... 122
Shamrock under sail........ 328
Shamrock II., launch........ *293
Shamrock II., yacht......... 389
Sheep fold, moving.......... 244
Shells, maximite............ 326
Signaling, submarine........ 73
Silk industry apparatus...... 113
Silkworm, the............... 118
Skeleton combat............. 38
South Portland steamer...... 261
Spectrum of rock salt....... 11
Spider, trap door............ 202
Spring for vehicles.......... 362
Spyglass, military.......... 10
Steamers, stern wheel....... 244
Steamships, submerged, raising 261
Steel car industry........... 385
Steel pipe, manufacture..... 200
Stegosaurus 184
Still, pine oil............... 344
Stralau-Treptow tunnel...... 392
Stud and pipe wrench....... 186
Subway, Berlin.............. 84
Sugar cane culture.......... 213
Sugar juice weighing machine 186
Switch, ceiling.............. 170
Switches, magnetic.......... 169

T

Tailor's goose............... 202
Tarantula 202
Telegraph, fac simile........ 373
Telegraph, page-printing..... 181
Telegraph, printing, Murray 277, 278
Telegraphy, teaching........ 216
Telegraphy, wireless, app.... 324
Telegraphy, wireless, duplex. 152
Telegraphy, wireless, steering by 101
Telephone, auto-commutator. 85
Telephone system, Chinese... 376
Telephone wire, paying out.. 58
Temple of Bel............... 135
Third rail system, Baltimore. 168
Tie, railway, metal.......... 362
Tobacco industry........... 309
Topophone, the............. 197
Torpedo, aerial, electric..... 10
Torpedo shell............... 314
Torpedo, steering........... 101
Toy, mechanical............ 27
Train lighting, car axle...... 56
Transport service, Philippines 177, 257, 262
Trees of California.......... 149
Tri-motor vehicle............ 73
Trinidad, pitch lake.....161, 166
Trolley pole guard.......... 308
Try-square, new............ 122
Tube expander, Burton...... 52
Tunnel, railway, Boston..... 185
Tunnel, rapid transit......37, 321
Tunnel, Stralau-Treptow..... 392
Turbine, Parsons'........... 260
Turbine plant, Rodney Hunt.. 225
Typesetting machine......... 145
Typewriter pictures.......... 75

V

Vaccine virus............... 41
Vacuum pump, preserve jar.. 75
Valve, frost, automatic...... 292
Valve mechanism for hydrants 122
Valve motion, pump......... 154
Valve, reducing............. 134
Vehicle, curious............ 410
Viaduct, railway............ 340
Village, disappearing........ 296
Virus, vaccine.............. 41
Vise, bench and pipe........ 101

W

Water gas apparatus........ 97
Water gas manufacture..... 33
Water supply, New York.337, 342
Water system, Chicago...... 405
Water wheels, ingenious..... 104
Weather gun................ 260
Weevils, bean............... 298
Weighing machine for liquids. 186
Whale, the gray............. 121
Wheat hospital, a........... 264
Wheel, fifth, novel.......... 282
Wheels, current............. 104
Windmill, novel............. 104
Wood and metal working.... 282
Wood piping................ 6
Worm gear, ball-bearing..... 27
Wrench, pipe................ 218
Wrench, pipe, new.......... 138
Wrench, pipe and stud...... 186

Y

Yacht Constitution.......... 289
Yacht Independence......... 193
Yacht Lysistrata............ 372
Yacht Prinzessin-Victoria-Luise 81
Yacht racing development... 233
Yachts, cup, of 1901........ 389

Z

Zea tunicata................ 135

◆

MISCELLANY.

Figures preceded by a star (*) refer to illustrated articles.

A

Academy of Sciences, National 259
Accumulators, test of....... 263
Acetylene, at Pan-American Exposition 327
Acetylene automobile....... 119
Acetylene gas vs. petroleum. 250
Acetylene, hydrogen from.... 371
Acetylene searchlights....... 329
Acid, tungstic, estimation... 131
Accident, docking, curious..*404
Aeronautical congress....... 130
Aeronautics in 1900......... 5
Aeroplane, Kress...........*137
Air compression, hydraulic... 354
Air, liquid, as blasting agent. 290
Air resistance of trains...... 83
Airship, Da Schio........... 83
Airship, the Kress.......... 50
Airships, dirigible.......... *10
Alaska, grain in............ 99
Alcohol, action on metals.... 359
Alcohol as fuel for motors... 344
Alcohol motors............. 362
Alexandra Palace, London... 8
Alkaloids, new, of tobacco... 218
Allen, F. I................. *227
Alps, a tour of the......... 119
Alternator, Parsons'........ *260
Aluminium cooking utensils.. 307
Aluminium, manufacture in Great Britain 151
Aluminium transmission..... 98
Aluminium, welding......... 23
Amalgam, ammonium....... 292
Amber, a unique piece...... 23
Ambulances, motor-driven... 119
Ammonium amalgam........ 292
Animal tissue, experiments.. 163
Animals, wild, in winter..... 323
Ant life, new features in....*265
Arc, electric, music from.... 131
Arc lamp, Rasmus...........*250
Arc, whistling..............*358
Arch, memorial, naval....... 162
Archaeological news.....119, 231
Armstrong, Lord............ 19
Army and marine, Russian... 195
Army officers, U. S......... 307
Army transport, abolition.... 306
Arsenic in the hair.......... 244
Asphalt, Trinidad...........*166
Athens observatory......... 42
Atmosphere, hydrogen in..... 231
Auto-commutator, telephone.. *85
Automobile, acetylene....... 119
Automobile and train race... 150
Automobile, army........... 167
Automobile in the army..... 102
Automobile device wanted.... 107
Automobile Exhibition, Vienna 119
Automobile, gasoline.........*148
Automobile industry of France 375
Automobile in Klondike...... 163
Automobile, the Krieger.....*356
Automobiles in Madagascar.. 310
Automobile mitrailleuse...... 343
Automobile news, 22, 54, 70, 87, 102, 119, 135, 150, 167, 183, 199, 214, 247, 263, 310, 326, 343, 358, 375, 390, 407
Automobile passenger car.... 310
Automobile service in Tunis.. 135
Automobile show............ *73
Automobile show, Paris...... 102
Automobile race, speed...... 402
Automobile work at Nice.... 226
Automobiles, De Dietrich....*120
Automobiles, electric........ 390
Automobiles, gasoline........ *57
Automobiles, heavy-weight test 343
Automobiles in New York.... 211
Automobilism in 1900........ 5
Automobilism, military...... 358
Automosied, the............. 87
Auto-sparker, the........... 310

B

Bacteria produce gases....... 262
Baggage check system....... 233
Bagworm, the...............*330
Balance, actinic, the........ *11
Baldwin-Ziegler expedition... 275
Balloons at Vincennes........*232
Ballooning, long distance.... 35
Baptistry of Florence, restoration 231
Barber shop, antiseptic...... 330
Barometer for balloons....... 231
Barometer, mercurial........ *74
Basaltic columns............ *68
Basilica of the Virgin........ 151
Basin, model, U. S..........*341
Bat, giant, of Philippines.... *35
Bath, mercury, form of the. *388
Battery, gas, new...........*310
Battery, storage, Edison.338, *376
Battle of Santiago...........*121
Battleship Czarovitch........*212
Battleship, our fastest..... 386
Battleships, Japanese........ 231
Battleships unprovided for... 226
Bayonet exercises, Russian...*324
Bean weevils................*298
Beaumont oil well........... *74
Beer, arsenical poisoning by.. 243
Beer from beet roots........ 167
Beer-cooling mixtures, prize.. 51
Beer-cooling, prize for....... 344
Berlin, subway of........... *84
Bicycle in 1900.............. 5
Bicycle joint, hydraulic......*324
Bicycle show, annual........ *57
Bicycle, speed records....... 34
Biggest in the world........ 402
Blackboard erasers, cleaners.*250
Blasting agent, liquid air as. 290
Bleaching, new method...... 36
Blood spots, recognizing..... 42
Boa, tree, California........ 23
Boat for south polar expedition 134
Boat, submarine, Turkish....*280
Bodies less than atoms....... 306
Boiler construction, point in.. 98
Boiler explosion, a..........*228
Boiler explosions............ *24
Boiler feeder, Rice..........*263
Boiler, locomotive, Vanderbilt *100
Boiler of solar motor........*169
Boiler, water tube........... 210
Bolometer, the.............. *11
Book holder, new...........*154
Boonton forge, the..........*165
Botanical Garden Museum ...227
Botany, institute, Regent's Park 71
Brake, car, electric.........*216
Brake that works........... 34
Brake, train, results........ 290
Breech plug, new........... *75
Bressa prize................ 154
Brick carrier, new..........*378
Bridge, East River.........*246
Bridge, East River, cables... 130
Bridge, East River, floor.....*374
Bridge, ferry, colossal....... 86
Bridge, London, renovation... 183
Bridge, London, widening.... *88
Bridge, North River.......... 274
Bride, stone arch, longest.... 358
Broaching brasses........... *21
Build, are you about to?..... 115
Bullet, modern infantry...... 374
Bullets, explosive effects..... 247
Bunk, folding, for cars.......*170
Buoys, petroleum...........*117
Burner, oil, wickless.........*218
Business column, our........ 115
Butter, coconut............. 282
Butter packing.............. 404

C

Cab, electric, service, Paris, 135, 390
Cable systems, test of....... 338
Cable, telegraph, longest..... 163
Cable, Trans-Pacific......... 323
Cables for East River bridge. 130
Cacti of California..........*149
Calcium carbide, price scales. 327
Camera, the largest.........*134
Canada, canals of.........*89, 290
Canada, electric railways of.. 262
Canal, drainage, Chicago..... 290
Canal, Erie, muddle......... 242
Canal, Erie, new............ 210
Canal, Mosel-Saar........... 88
Canal, Sault Ste. Marie...... 19
Canal, Suez................. 210
Canal, Suez, traffic......... 183
Canals of Canada............ 290
Canals, electric traction on... 58
Candlestick, miners'......... *58
Cannon, weather, new.......*260
Capsuling machines.........*138
Car brake, electric..........*216
Car fender, Watson.........*372
Car ferries, American........ *40
Car kitchen, a.............. 293
Car mover, simple..........*282
Car, passenger, automobile... 310
Car, trolley, fast............ 87
Car, trolley, funeral......... 118
Cars, pressed steel..........*391
Cars, street, old, utilizing..*409
Carbide, market for, in India. 71
Carbon chlorides, production..*180
Carburants, test of.......... 358
Carpets, Oriental, new method 343
Carrara marble............. 55
Carthage, excavations at.... 371
Casts, plaster, large.........*249
Cave, wind, Black Hills...... 328
Ceiling switch..............*170
Celluloid, new.............. 371
Cellulose, nitro, powders..... 274
Celtic, steamer, launch of...*276
Cement gasholder, a........ 343
Cement for South Africa..... 372
Cerigo island, discoveries at. 231
Channels, dredgers for....... *25
Charleston Exhibition........ 122
Chicago drainage canal...... 290
Children, German, education. 362
Chimney, a concrete.........*308
Chimney, a large............ 39
Chimneys, tall.............. *21
Christmas Island............ 310
Cigarettes vs. cigars......... 387
Cigars, cigarettes and pipes.. 387
Cinematograph for the blind..*201
Cities, future, areas of...... 393
Clarke, T. C., death........ 403
Cliff-dwelling park..........*297
Clipper grinder, new........*122
Cloaca Maxima, discovery of. 51
Clock faces, illuminated..... 311
Clock, perpetual motion......*276
Clock, Russian, curious...... *52
Clock, a wonderful.......... *7
Clothing of ancient Romans.. 387
Coal, anthracite, size........ 215
Coal in Australia............ 294
Coal, high price, England.... 83
Coal regions, Germany's two.*153
Coal, scarcity, in Russia..... 55
Coal, Spitzbergen........... 374
Coal, substitute for.......... 231
Coatzacoalcos harbor........ 23
Cobalt, compounds of........ 154
Cobalt specific heat......... 217
Cocaine sniffing............. 323
Cocoa cultivation............*360
Coconut butter.............. 282
Coherer in storm detection... 242
Collar, safety, for shafts.....*170
Columns, basaltic........... *68
Comet, Encke's, return...... 371
Comet, Giacobini............ 407
Commissioner of patents, new.*227
Compounds, chemical, new... 242
Congress, aeronautical....... 130
Conjunctiva, irritation...... 376
Constitution, launch of......*312
Constitution, yacht.... 295, *389
Consumption, decomposed light in 179
Copper casting.............. 217
Copper mining in America...*356
Copy holder, new........... 154
Copyright decision.......... 134
Copyrights in 1900.......... 390
Corn, pod..................*135
Cotton gin, new............*218
Cotton growing, Cuba........ 278
Cotton mills, first cost....... 291
Cotton industry, Southern.... 243
Coupling, the Zodel......... *21
Cruiser, armored, discussion 247, 279
Cruiser Montcalm........... *10
Cruisers, armored, new...185, 183
Cruisers, armored, our...... 103
Cruisers, German, reconstruction 402
Cruisers of the St. Louis class 87
Cruisers unprovided for...... 226
Cuba, cotton growing in..... 278
Cupellation 119
Cup-yacht designing........ 194
Cup yachts, three, 1901...... 389
Curie's experiments.........*346
Curiosity and science........ 162
Current of 3,000 volts....... 178
Cutler's shop at Exposition... *90
Cycling industry, England... 103
Czarovitch, battleship.......*212

D

Dead Sea, rise in........... 190
Derailment, curious......... 375
Derrick, novel..............*250
Dinosaur, the great.......... 291
Dinosaurs, American........*184
Directory, penny-in-the-slot.. 151
Disaster, ferryboat.......... 402
Dock, dry, floating..........*377
Document 384, Congress..... 362
Door latch, refrigerator......*138
Drainage canal, Chicago..... 290
Drainage of Lake Copais..... *26
Draught, forced, effect of.... 50

Dredge, dipper, powerful.....*116
Dredges for New York channels.....*25
Dry dock, new.....*377
Duell, Commissioner, resignation.....179, 195

E

Earthquake waves, velocity.. 292
East River Bridge.....*246
East River Bridge, cables for. 130
Eclipse expedition...226, 244, 339
Educator, an..... 38
Efficiency in action..... 83
Egleston, Thomas, monument to..... 199
Electrical notes, 23, 38, 71, 87, 119, 151, 199, 255, 267, 294, 311, 343, 375, 391
Electricity, betting by..... 294
Electricity in 1900..... 4
Electricity, thefts of..... 190
Electro-capillary action..... 134
Electrograph, the.....*373
Elephant in plowing..... 307
Elevator disease, the..... 179
Elevators, electric service.... 119
Ellipsograph, an.....*106
Encke's comet..... 371
Engine, rotary, Porter.....*201
Engines, gas..... 387
Engineering in 1900..... 4
Engineering notes, 8, 23, 39, 55, 71, 86, 103, 151, 167, 183, 215, 231, 274, 327, 343, 358, 374, 390, 406
Engineering progress, American..... 178
Engineers, electrical, Africa.. *58
England, long-deferred decadence..... 98
Equipment, costly..... 370
Erie Canal muddle..... 242
Erie Canal, new..... 210
Eros, the celestial range finder..... 163
Eros, the light of..... 307
Excavations at Nippur.....*135
Exhibition, Charleston..... 122
Exhibition, Glasgow, 1901... 179
Expedition, Baldwin-Ziegler.. 275
Expedition, eclipse..... 226
Expedition, eclipse, Sumatra.. 244
Expedition to Labrador..... 134
Expeditions, polar, Baldwin.. 87
Expedition, south polar..... 134
Experiments of M. Curie.....*346
Explosion, boiler, a.....*228
Explosions, boiler..... *24
Explosive, maximite..... 322
Exports, our, of 1900..... 4
Exposition, automobile, Vienna..... 119
Exposition, Pan-American, 275, 298, 338, *361
Exposition, St. Louis, 1903.. 371
Expositions of 1900..... 4

F

Farming, irrigation..... *53
Faucet, automatic.....*404
Fender, car, Watson.....*372
Ferry bridge, colossal..... 86
Ferries, car, American..... *40
Fever, typhoid, from mangles 8
Fever, yellow..... 194
Fever, yellow, and mosquito.. 371
Field glass, military..... *10
Fifth-wheel, novel..... 282
Fire-alarm, pyrotechnic..... *6
Fire, a curious..... 86
Fire engines, steam, English. 390
Fire from waste paper..... 406
Fire pumps, electric..... 311
Fires in ships' holds..... 374
Firearm, German, new..... 151
Fish, self-burying..... 138
Fishing lines, silkworm guts.. 88
Fishing with a steam pump.. 150
Flint implements, discovery.. 151
Floor of East River Bridge... 374
Floor wax..... 392
Flowers, influence of darkness on..... 307
Fluoroscope, stereoscopic..... 71
Flying machine, Denny's..... 177
Flying machine, Hofman's...*281
Flying machine, new..... *72
Flying machine, Whitehead's.*357
Fog, London, cost of..... 86
Fomentations, press for..... *75
Foods of the Filipinos..... *85
Forest lands, preservation.... 243
Forestry, India and Canada.. 322
Forge, Boonton, old.....*165
Forum, discoveries in.....51, 119
Fountain, an ice.....*328
Fountains, illuminated.....*212
Frost valve, automatic.....*292
Fuel, alcohol, for motors..... 344
Fuel, liquid, for fire engines 343
Fulton, torpedo boat.....*388
Funeral trolley car..... 118
Furnace, refuse, new system 6
Furs, cold storage..... 243

G

Games, Chinese..... 99
Gans system, the..... 194
Garden, botanical, new..... 6
Gas, acetylene, vs. petroleum. 250
Gas battery, new.....*310
Gas, cheap..... 294
Gas engines..... 387
Gas, new, from radium..... 243
Gas, thefts of..... 190
Gas, water, manufact..*39, *102
Gases produced by bacteria.. 362
Gasholder, cement concrete.. 343
Gasoline automobile.....*57, *148
Gasoline, runabout..... 57
Geological Society, American. 19
Georgia, wave line of..... 370
Gin, cotton, new.....*218
Glasgow Exhibition, 1901.... 179
Glass industry, new products. 242
Glass, plate, manufacture.... 311
Glassware, Germany, new.... 323
Glycerine, nitro, powders.... 374
Gold mining of Transvaal.... 230
Gold Room, Metropolitan Museum..... 23
Gongs, vehicle, abolishing.... 119
Goose, tailor's, novel.....*202
Grain in Alaska..... 99
Grain, a new..... 135
Grains, color of..... 314
Gramme, Zenobe T..... 118
Gramophone, simple.....*290
Granite, a large block of.... 231
Grapes, Hungarian..... 229
Grave, mound builder's..... 71
Gray, Elisha, death of..... *72
Grazing pen, moving.....*244
Great lakes, Canadian route.. 354
Great Salt Lake, recession.. 231
Gun, 7-inch vs. 6-inch..... 215
Gun, 16-inch, criticism..... 34
Gun, army, new..... 151
Gun, coast defense..... 306
Gun, disabled, Kearsarge's...*345
Gun erosion..... 114
Gun, field, quick-firing..... 261
Gun, quick-firing..... *20
Gun, Robinson Crusoe's..... 375
Gun-stock, adjustable.....*410
Gun, torpedo, Gathmann.....*313
Gun, weather, new.....*260
Guns, efficiency in action.... 83
Guns, Krupp, efficiency..... 354
Guns, old, destruction of..... 151
Gutta percha substitute..... 71
Gyroscopes, electrical.....*245

H

Hair, arsenic in the..... 244
Hammer, power, new.....*388
Harvesting, extraordinary.... 122
Hawaiian steamship..... 86
Haystacker, novel.....*250
Heat rays, transparency..... 54
Heavens in April..... 211
Heavens in February..... 67
Heavens in January..... 9
Heavens in July..... 403
Heavens in June..... 339
Heavens in March..... 131
Heavens in May..... 279
Helium, pure..... 87
Hichborn, Admiral, retired.. 130
Hill-climbing race, Paris.... 9
Hinge, a novel.....*106
Hoisting device..... *36
Holy Land, improvements in. 394
Homes, historic, photo record 387
House moving, 8-mile..... *56
Hydrants, valve for.....*122
Hydraulic plant in Java..... 330
Hydraulic plant, Swiss..... 86
Hydrogen from acetylene.... 371
Hygroscope, a simple..... *36
Hypo in photographic work. 211
Hypochlorites, apparatus for. 378

I

Ice conveyor, new.....*308
Ice, dielectric strength..... 294
Ice fountain.....*328
Ice in Brazil..... 183
Igniter, a new.....*292
Illinois, battleship..... 386
Illinois, trial of the..... 195
Independence, yacht.. *198, *389
Indigo, Bengal..... 291
Induction coil, new..... *7
Industrial crisis, Belgium... 103
Industry, a singular.....*202
Ingenuity, a triumph of.... 147
Ink well, breaking of an... *84
Insect, interesting..... 330
Insect parasite, an.....*394
Insects, Malayan..... 23
Institute, Smithsonian, report 174
Institutions for medical research..... 387
Insulator, new form of.....*106
Interrupter, Wehnelt..... 230
Invention, progress of..... 267
Inventions, Jefferson's..... 359
Inventions, novel..... *75
Inventions, prizes for..... 114
Inventions, recently patented 12, 28, 43, 59, 76, 107, 123, 139, 155, 187, 203, 235, 251, 267, 282, 299, 315, 331, 347, 363, 395 411
Inventions wanted.....57, 358
Iron in New Zealand..... 327
Iron structures, protection of. 386
Iron rose.....*296
Irrigation farming..... *53
Irrigation, Hawaiian..... 20
Irrigation works, Nile.....*279
Island of Cerigo, discoveries. 231

J

Jerome Park Reservoir.....*342

K

Kammatograph..... 330
Kearsarge, gun, disabled....*345
Keller, Helen, speech of..... 58
Korea, launch of.....*228

L

Labrador, expedition to..... 134
Lace workers, strike among. 83
Lake Baikal, transportation. 290
Lake Copais, drainage..... *26
Lake, Great Salt, recession. 231
Lake Tanganyika..... 199
Lakes, Great, Canadian route 235
Lamp, arc, a new..... 38
Lamp, arc, Rasmus.....*250
Lamp, Cooper Hewitt..... 266
Lamp, incandescent, new.... 278
Lamps, incandescent and thunder..... 375
Lamps, lens for, tubular... *84
Lathe for granite columns.. *22
Launch of the Celtic.....*276
Launch of the Constitution..*312
Launch of the Fulton.....*388
Launch of the Korea.....*228
Launch of the Ohio.....*358
Launch of Shamrock II.....*293
Lead pencils in Germany.... 358
Lead, white, new process.... 151
Lens, tubular, for lamps.... *84
Lepers, treatment..... 243
Life saving apparatus..... 342
Life guard, Watson.....*372
Light, electric, for Wittkiel. 71
Light, incandescent, vs. eyes. 8
Light, Nernst..... 407
Light, therapeutic action.... 117
Light, wireless, Tesla's.... 67
Light, zodiacal..... 115
Lights, search, acetylene... 329
Lighting board, electric..... 186
Lighting trains from axle... *56
Lightning, damage by..... 343
Liquid, height in cask..... 102
Lizard, a two-tailed..... 23
Lizards, color change of.... 378
Locomotion, road..... 22
Locomotives, American, abroad..... 386
Locomotive boiler, Vanderbilt*100
Locomotive, express, German. *55
Locomotive, express, powerful*165
Locomotive of the future.258, 294
Locomotive, petroleum..... *36
Locomotive works, Baldwin.. 71
London bridge, renovation... 183
London and New York, growth..... 322
Long fog, cost of..... 86
Lord Armstrong..... 19
Lotus poison..... 130
Low, President.....*373
Lunchroom, a penny..... 51
Lubricator, Slater.....*234
Lysistrata, yacht.....*372

M

Macaroni, how made..... 115
Magnalium..... 151
Mail-box, novel.....*404
Mails, electric protection.... 227
Maine, raising, bids for..... 90
Malaria.....199, *314
Malaria, transmission by mosquitoes..... 149
Mammon, age of..... 344
Man, truncated.....*105
Manhattan Railway, electric. 370
Mantis religiosa.....*105
Mantle, Welsbach, how made 153
Manuscripts at Mukden..... 8
Marble, testing.....*393
Mars, light flash from..... 179
Mars, signaling from..... 51
Mars, that message from.... 34
Mastodon, the Brooklyn.....*312
Maximite, tests of.....*325
Mercury bath, Hamy.....*388
Metal-beater, Thurston..... *27
Metal-cleaning compound..... 231
Metal, electrical resistance.. 106
Metal and woodworking.....*282
Metals, hardness of..... 410
Meteors seen in daylight.... 375
Meteorites, composition of... 278
Mica as an insulator..... 247
Microphone patent, Berliner. 162
Millinocket mill.....*230
Mineral resources, our..... 408
Mines, copper, American....*356
Mines, prehistoric..... 234
Mirograph, the..... *37
Mitrailleuse, automobile..... 343
Monkey skins, value of..... 151
Monorail system..... 258
Montcalm, cruiser..... *10
Moore, Edward B.....*275
Mortising machine, Smith...*346
Mosel-Saar Canal..... 88
Mosquito and yellow fever.. 371
Mosquitoes and malaria.148, *314
Motor vehicles, Holland..... 150
Motors, alcohol..... 362
Motors, electric, street car.. 409
Motors, gas..... 387
Motors, liquid-air, wanted... 119
Motors, solar.....*169
Motors, sun, for India..... 375
Motormen, school for..... 214
Movers, prime, cost..... 82
Mummy, a very ancient.... 99
Museum, Botanical Garden.. 227
Mutoscope, the.....*196

N

Naval bill..... 66
Naval construction, American..... 247
Navy, U. S., in 1900..... 5
Navy Yard work, high class 339
New York, vertical growth. *137
Niagara Falls, power plant *229
Nicaragua water supply..... 22
Nickel, specific heat..... 217
Nickel steel patent suit.... 281
Nicotine, effects of..... 387
Nile irrigation works.....*279
Nilgiri railway..... 390
Nippur, excavations at.....*135
Nitro cellulose powder..... 274
North River bridge bill..... 274
Novelties, patented.....*27, *122
Nut, relief..... *75

O

Observatory, Athens..... 42
Observatory, magnetic, new. 230
Ocher, French..... 215
Ohio, launch of the..... 359
Oil burner, wickless..... 218
Oil, pine needle.....*344
Oil well, Beaumont..... *74
Oil well in Texas..... 116
Omnibuses, electric, Berlin.. 214
Omnibuses, motor..... 310
Omnigraph, the.....*216
Orange peel, objects of..... *88
Oranges, blood, Germany.... 410
Orchestra-man, the.....*117
Ordnance, British.....*248
Ore unloader, automatic.....*153
Osmium lamp filaments..... 375
Ostrich feathers, industry....*164
Oxygen, commercial..... 167

P

Pail for fish bait.....*154
Paint, cold water..... 343
Pan-American Exposition, 275, 298, 338, *361
Papyri, Egyptian..... 119
Papyri, Egyptian, rare..... 99
Papyri from Oxyrhycus..... 231
Papyri, Ptolemaic..... 119
Park, cliff dwelling.....*297
Parthenogenesis, artificial, 179, 259
Patent commissioner, resignation..... 195
Patent decision, telephone.. 146
Patent decisions, three..... 179
Patent rights, new ruling.. 375
Patent suit, compromise of.. 281
Patent with a history..... 147
Patents, assist. commissioner.*275
Patents, commissioner, new.*227
Patents, commissioner, report 98
Patents, lucrative..... 88
Patents, Marconi..... 311
Pavlosaurus, the..... 243
Pen, the Fowler.....*250
Pendulum beat, adjusting....*122
Petroleum for buoys.....*117
Petroleum well, Beaumont.. *74
Petroleum wells in Texas.... 116
Pharmacy in Germany..... 371
Philippines, life in the..... 346
Philippines, transport service.....*262
Phonograph record, permanent..... 147
Phonograph records, duplic.. 242
Phosphorus, preparation of.. 66
Phosphorus, production.....*180
Photo work, hypo in..... 211
Photograph, the largest..... 151
Photographs, X-ray..... 119
Photography in two colors.... 404
Photography, rapid..... 407
Photomicrography.....*329
Phototherapathy..... 117
Picture, moving, litigation.. 19
Pigeons, carrier, new use for. 55
Pile driver, a new.....*232
Pine needle industry.....*344
Pinto, Serpa, death of..... 115
Pipe galleries, rapid transit. 322
Pipe, steel, manufacture....*200
Pipe and stud wrench.....*186
Pipe wrench.....*138, *218
Pipes vs. cigars..... 387
Piping, wooden..... *6
Pitch Lake of Trinidad.....*166
Planets, communication with. 118
Plants of California.....*149
Plaster of Paris process, new 322
Plates, armor, corrosion of. 194
Plates, porous lead..... 215
Plays, Chinese, unscientific.. 99
Plow, double-share.....*263
Pod, corn.....*135
Pollok memorial prize..... 147
Pompeii, excavations at.... 119
Population of U. S. center.. 88
Port of call at Dover..... 183
Potter of Old Berry.....*135
Pound per H. P. economy... 82
Powder, smokeless.....114, 274
Power, hydraulic, of the Rhone..... 118
Power plant, Niagara Falls..*229
Power station, greatest.... 370
Press for fomentations..... *75
Prinzessin - Victoria - Luise, yacht.....67, *86
Prize, the Bressa..... 154
Prize, Pollok memorial..... 147
Projectiles, manufacture in England..... 167
Propeller screw, new..... 55
Property, industrial, protection..... 50
Propulsion, turbine, progress. 82
Provisioning transatlantic liner.....*406
Pump, self-measuring.....*378
Pumps, valve motion for.....*154
Pyridine, effects of..... 387

Q

Quagga, the..... 281
Quarries, Carrara..... 55
Queen Victoria..... 66

R

Racine machine, De Dietrich*120
Radio conductor, Popoff.....*324
Radium, new gas from..... 243
Rail joints and strut poises.. 82
Rail, third, system..... 119
Rail, third system, Baltimore.....*168
Rails, British, export..... 7
Rails, creeping of..... 390
Railroad accident.....*184
Railroad, Tehuantepec..... 231
Railroads in the Caucasus... 38
Railroads of Roumania..... 346
Railway, electric, London.... 119
Railway, electric, underground..... 391
Railway, electric, Valtellina.*408
Railway, Great Eastern..... 292
Railway, Manhattan electric. 370
Railway, Nilgiri..... 390
Railway, Rome and Naples. 275
Railway, Tehuantepec..... 294
Railway tickets, automatic sale..... 358
Railway tie, metal.....*362
Railway, Trans-Siberian..... 84
Railway tunnel, street.....*185
Railway, underground, Boston.....*69
Railway viaduct, Des Moines.*340
Railways, electric, of Canada 292
Railways, electric, London.. 194
Railways, growth, England.. 167
Railways, steepest in the U. S..... 70
Rain, bloody..... 291
Rain, red..... 263
Raisin culture, California... *3
Rangefinder, Eros, the..... 163
Rapid transit galleries..... 322
Rat, league against the.... 346
Rats, bacilli..... 90
Ray, X, photographs..... 119
Ray, X, tubes, new..... 323
Ray, X, work, present state.*245
Rays, Becquerel..... *3
Rays, heat, transparency.... 54
Rays, X, absorption laws.... 370
Rays, X, injury by..... 52
Reaper, sugar cane, wanted.*213
Record, Mariposa breaks the. 86
Refrigerator, doorlatch.....*138
Reid, James D., death of.... 294
Request, disingenuous..... 135
Reservoir, Jerome Park.....*342
Rhone, hydraulic power of.. 118
Rhone, water power of..... 375
Rice farming..... *53
Rifle, Lee-Enfield, efficacy.... 151
Rifle sighting device..... 36
Road locomotion..... 22
Rocking-chair and cradle....*410
Rock of Gibraltar, defense.. 358
Romans, ancient, clothing of. 387
Rose, iron.....*296
Rothwell, R. P., death of.... 259
Roumania, railroads of..... 346
Rowland, Henry A., death of. 259
Rubber cultivation, Mexico.. 307
Ruminant, peculiar..... 323
Runabout, gasoline.....*57, *148
Runner for vehicles..... *52

S

Saccharine, use forbidden.... 291
Sad-iron, novel.....*202
Safety collar for shafts.....*170
Salamander, cave, new..... 51
Salt deposit, remarkable.....*217
Samarium oxide..... 291
San Gimignano.....*148
Sandy Hook, results at..... 322
Santiago, battle of.....*121
Sarcophagus, marble, splendid 35
Sault Ste. Marie Canal..... 19
Saw setting machine..... *68
School for motormen.....*215
Science and curiosity..... 163
Science notes....8, 23, 35, 51, 71, 83, 99, 115, 151, 167, 179, 199, 231, 243, 291, 307, 323, 339, 359, 371, 387, 403
Scorpion, the.....*202
Scouts, 25 knot naval..... 371
Screw eye tool.....*292
Seat, vehicle, supplemental..*362
Seed distribution, government 151
Seeds, color of..... 314
Shaft, broken, repair of....*122
Shamrock II., launch of.... 293
Shamrock II., yacht.....*389
Shamrock and Constitution.. 306
Shamrock, factor of safety... 339
Shamrock under sail.....*328
Sheep fold, a moving.....*244
Sheep, foot and mouth disease..... 167
Sheep, mountain, new..... 115
Ship-subsidy bill..... 18
Ship, Viking, discovery of.... 8
Ships, iron, early..... 294
Shipping at Nagasaki..... 410
Shrimp, color change in..... 149
Siberia in glacial age..... 280
Sidewalk, moving, Paris.... 119
Signaling, submarine..... *73
Signals, submarine..... 34
Signals, system, automatic.. 294
Silk manufacture..... 118
Silk, treatment of..... 291
Silkworm gut fishing lines.... 88
Silkworms, colored light on.. 231
Simplon tunnel..... 178
Skeleton combat, a..... *38
Slag cement road, a..... 358
Smithsonian report..... 274
Soil, chemistry of..... 394
South Portland, steamer....*261
Speed of motor cars, recording..... 22
Spider, trapdoor.....*202
Spinning machine, new..... 167
Sponge fishery, electric light in..... 199
Sports, Chinese..... 99
Spring for vehicles.....*362
Spy-glass, military..... *10
Stairs, fireproof..... 274
Standards for X-ray work.. 323
Star, new, in Perseus....146, 167
Stars, double, orbits of..... 51
Steam meter, a..... 39
Steam turbine.....18, 26
Steamer, ice-breaking..... 39
Steamers, high speed..... 114
Steamers, stern wheel.....*244
Steamship Hawaiian..... 86
Steamship, the modern..... 162
Steamship, raising a.....*261
Steamships, Clyde line..... 402
Steel cars.....*391
Steel works, new, projected.. 357
Step backward, a..... 226
St. Louis Exposition..... 371
Stonehenge, preservation of. 340
Stralau-Treptow tunnel.....*392
Street noises and rail joints 82
Stud and pipe wrench.....*186
Submarine, British navy.... 258
Subway of Berlin..... *84
Suez Canal..... 210
Suez Canal, traffic..... 183
Sugar bounties problem..... 35
Sugar cane reaper wanted..*213
Sugar, electrolytic..... 186
Sugar, Japanese..... 390
Sugar juice weighing.....*186
Sugar, Russian..... 116
Suicide statistics..... 199
Sun motors for India..... 375
Sunflower, the..... 153
Switch, ceiling.....*170
Switzerland, leveling of..... 231
Sylviculture..... 210
Synthol..... 323

T

Tailor's goose, novel.....*202
Tanganyika, Lake..... 199
Tarantula, the.....*202
Tasmania, native race of... 35
Tea, consumption, British.... 359
Technology, judgment in.... 107
Telegraph cable, longest.... 163
Telegraph, Cairo-Cape..... 294
Telegraph, facsimile.....*373
Telegraph, page printing, *181, *277
Telegraphy, aerial..... 194
Telegraphy, optical..... 294
Telegraphy, teaching.....*216
Telegraphy, wireless, 84, *72, 148, 215
Telegraphy, wireless, apparent.....*324
Telegraphy, wireless, experiment..... 87
Telegraphy, wireless duplex, 146, *152
Telegraphy, wireless, England 410
Telegraphy, wireless, on lighthouses..... 355
Telegraphy, wireless, Marconi....23, 138, 199, 247, 391
Telegraphy, wireless, in the navy..... 311
Telegraphy, wireless, steering by.....*101
Telegraphy, wireless, Tesla's 114
Telegraphy, wireless, on vessels..... 119
Telephone auto-commutator.. *85
Telephone business, status.. 340
Telephone company wins suit 8
Telephone exchanges of U. S..... 362
Telephone journal, Budapest. 199
Telephone patent decision.... 146
Telephone, penny-in-the-slot.. 71
Telephone system, Chinese..*376
Telephones affected by rain.. 247
Telephones, public, New Haven..... 261
Telephones in South Africa.. *58
Telephony, long distance, Pupin's..... 50
Telephony, wireless..... 106
Tehuantepec railway.....231, 294
Theater of Augusta Taurivorum..... 119
Theater at Ephesus..... 119
Thorite, test of..... 259
Thorium compounds..... 290
Tie, railway, metal.....*362
Tiffany exhibit at Paris..... 38
Timber, conservation of..... 263
Tinfoil industry, growth of.. 354
Toads in rocks..... 100
Tobacco industry, the.....*309
Tobacco, new alkaloids..... 218
Tobacco, sweating..... 359
Tomatoes, canned, colored... 51
Topophone, the.....*197
Torch, marine..... 39
Torpedo gun.....*313
Torpedoes, steering.....*101
Towers of San Gimignano.. *148
Towing tank..... 66
Town, disappearing.....*296
Toy, mechanical..... *27
Traction, electric..... 247
Traction, electric, Europe... 306
Trade, advancing, our..... 210
Trade in machinery, German 370
Trade marks, registering.... 66
Trades union interference..... 34
Traffic, congested, of London..... 355
Train brake results..... 290
Train lighting, from axle... *56
Trains, air resistance..... 82
Trains, underground, vibration..... 98
Tramway, electric, London.. 314
Transit, rapid, Brooklyn..... 226
Trans-Pacific cable..... 323
Trans-Siberian Railway..... 84
Transparency of heat rays.. 54
Transport, army, abolition.. 306
Transport service, army....*262
Transport service, Philippines..... 182
Transportation in 1900..... 4
Transportation on Lake Baikal..... 290
Trees of California.....*149
Trees, distribution of..... 307
Tricycle, motor, De Dion... 9
Trinidad, Pitch Lake of....*166
Trolley car, fast..... 87
Trolley car, funeral..... 118
Trolley pole guard.....*308
Troops, loss in Philippines.. 355
Try-square, new.....*122
Tube expander, Burton..... *52
Tube, pneumatic, service.... 58
Tubes, mail, pneumatic..... 375
Tubes, X-ray, new..... 323
Tuberculosis, congress on.... 179
Tunica and toga, material of. 387
Tunis, tour of..... 150
Tunnel, East River..... 114
Tunnel to Isle of Wight.... 195
Tunnel, rapid transit, *37, *327, 370
Tunnel, Simplon..... 178
Tunnel, Stralau-Treptow.....*392
Tunnel, street railway.....*185
Tunneling craze..... 34
Turbine, Parsons.....*260
Turbine plant, Rodney Hunt.*230
Turbine propulsion..... 82
Turbine, steam.....18, 26
Turrets, superposed..... 98
Typesetting machine.....*150
Typewriter picture making.. *75

V

Vaccine virus..... *41
Vacuum pump, preserve jar. *75
Valve for hydrants.....*122
Valve, frost, automatic.....*292
Valve motion for pumps.....*154
Valve, reducing, automatic..*134
Vehicle, curious.....*410
Vehicle runner, new..... *52
Vessel, sailing, 20th century. 50
Vessels, lake, for Atlantic trade..... 226
Vessels, scout, fast..... 371
Vessels, submarine, British.. 258
Vesuvius, eruptive period... 203
Viaduct, railway, Des Moines.*340
Vibration, underground trains 98
Victoria..... 66
Village, Indian, remains of. 195
Virus, vaccine..... *41
Vise, bench and pipe.....*101
Voltaire, statue of..... 198
Von Zeppelin honored..... 106

W

Warships, fighting efficiency. 82
Water in ancient Rome..... 346
Water gas, manufacture, *39, *102
Water hyacinth nuisance.... 151
Water pipe, wooden..... *6
Water supply, New York....*342
Water system, Chicago.....*405
Water-way improvements... 27
Waterways of Canada..... 290
Waterwheels, ingenious.....*104
Wave line of the Georgia... 370
Waves, earthquakes, velocity 292
Wax, floor..... 392
Weather gun, new.....*260
Weevils, bean.....*298
Weighing liquids.....*186
Well, gushing, in Texas..... 52
Wells, oil, in Texas..... 116
Whales, running down.....*121
Wheat hospital.....*264
Wheel, fifth, novel.....*282
Whirlwinds in Germany..... 340
White House enlargement... 34
White, Sir William..... 114
Wind registering..... 198
Windmill electric plants.... 134
Windmills, novel.....*104
Wine production, French, 1900..... 277
Winklebury estate..... 387
Wood, fossilization..... 26
Wood and metal working....*282
Wood carving, imitation.... 387
Woodworkers competition.... 135
Workmen, favoritism to.... 27
Worm-gear, ball-bearing..... *27
Wrench, pipe.....*128, *218
Wrench, pipe and stud.....*186
Writing, erased, to recognize 38

Y

Yacht Constitution..... 295
Yacht, cup, framing for.... 216
Yacht designing..... 194
Yacht Independence.....*198
Yacht Lysistrata.....*372
Yacht Prinzessin - Victoria - Luise.....67, *86
Yacht racing, development.....*233
Yacht racing and the towing tank..... 66
Yacht, royal, new..... 114
Yachts, cup, of 1901.....*389
Year 1900, retrospect..... 4
Yellow fever..... 194

Z

Zea tunicata.....*135
Zinc in Poland..... 8